



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/749,825

12/28/2000

John Alson Hicks III

00216

5201

38516 7590 03/01/2012

AT&T Legal Department - SZ

Attn: Patent Docketing

Room 2A-207

One AT&T Way

Bedminster, NJ 07921

EXAMINER

SALTARELLI, DOMINIC D

ART UNIT

PAPER NUMBER

2421

MAIL DATE

DELIVERY MODE

03/01/2012

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/749,825	HICKS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	DOMINIC D. SALTARELLI	2421	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2012.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 1,5-14,36,39-46 and 52 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1,5-14,36,39-46 and 52 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed September 16, 2011 have been fully considered but they are not persuasive.

Applicant argues that the embodiment of Humpleman which places the NIUs within a master set top box separates the NIUs from the internal bus system of said master set top box by citing col. 4 line 66 - col. 5 line 25, and thus Humpleman does not teach the claimed bus structure, citing that the internal components of the master set top box would not be connected to the claimed media bus.

In response, the internal network disclosed by Humpleman is the claimed bus structure, as the rejection of claims 1 and 36 states "a plurality of buses interconnecting internal components of a gateway (shown in fig. 1, internal network 34 and fig. 7, where the crossbar is found within a gateway device, col. 5, lines 20-25)". The components of the master set top box which are connected to the claimed bus structure are just those necessary for internalizing the multiport switched hub as disclosed (such as a processor and memory for controlling the routing of content, see for example microprocessor 110, col. 10, lines 47-67). Other components of the master set top box which allow it to perform the functions of a conventional set top box receive content from the bus in the same manner as the distributed set top boxes (via a switch port, see fig. 3, where said switch port would be internal to said master set top box due to the fact that the switched hub is internal to said master set top box). The fact of the matter is that Humpleman

discloses an embodiment where each of the NIUs, the crossbar switch, and the hub are all interconnected and internal to a single gateway device.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5-14, 36, 39-46, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humpleman (6,005,861, of record) in view of Eames et al. (6,493,875, listed on the IDS filed 7/30/07) [Eames], Russo (6,732,366, of record), and Inoue et al. (4,890,1680, of record) [Inoue].

Regarding claims 1, 36, 44, and 52, Humpleman discloses a system for providing digital entertainment data, the system comprising:

a plurality of buses interconnecting internal components of a gateway (shown in fig. 1, internal network 34 and fig. 7, where the crossbar is found within a gateway device, col. 5, lines 20-25), the gateway comprising:

a processor and memory connected to a bus of the plurality of buses (a “master” set top box containing network interface units, routing received media through itself to the network, thus the processor and memory of this set top box are connected to the media bus the content is output to, col. 5, lines 20-25, further the components of the switched hub that has been integrated into the

master set top box itself includes a microprocessor and memory, see fig. 7 and col. 10, lines 47-67);

multiple pairs of a tuner and demodulator with each pair of the tuner and demodulator receiving a plurality of information signals (network interface units 32, col. 9, lines 44-64);

decryption logic having an input connected to the multiple tuner pairs to received encrypted digital information from the multiple pairs and produce decrypted digital information (col. 7, lines 55-57);

decoder logic having an input connected to an output of the decryption logic and receiving the decrypted digital information from the decryption logic, the decoder logic reformatting the decrypted digital information and producing reformatted digital information (network interface units also perform any necessary error correction and formatting into Ethernet packets, col. 9, lines 44-64);

a data switch connected to the bus, the data switch receiving the information signals and sending the information signals to a plurality of switch ports (switch hub 38, shown in fig. 2, which comprises crossbar switch 44 which provides the switch ports that connect the devices, col. 5, lines 26-44) with a port for sending high-bandwidth information signals from the data switch (such as for sending video information to set top equipment, see fig. 2).

Humpleman fails to disclose a digital converter connected to the multiple pairs to receive analog information from the multiple pairs and to produce digital

Art Unit: 2421

information, a system data bus connected to the media bus, a video overlay processor having three video overlay processor inputs and a video overlay processor output, a first video overlay processor input connected to a second media bus output of the media bus, a second video overlay processor input connected to a third media bus output of the media bus, and a third video overlay processor input connected to the system data bus, the video overlay processor output connected to the system data bus, the video overlay processor superimposing a first audio-visual signal over a second audio-video signal to produce a superimposed signal and outputting the superimposed signal over the video overlay processor output to the system data bus, a network bus having a network bus input connected to the system data bus and receiving the superimposed signal, and a mass storage device connected to the system data bus.

In an analogous art, Eames discloses a system for providing digital entertainment data (fig. 3), and teaches that it is well known to utilize several interconnected buses to route information within a gateway (col. 5, lines 26-36). Designation of the buses within the system is a largely arbitrary practice, since interconnected buses can be considered a single bus or a collection of buses equally well. Eames simply names buses according to the type of data which they transport.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Humpleman to include plural

interconnected buses as taught by Eames. While Humpleman clearly inherently includes a bus to transport data from the network interface units to the hub, Eames is evidence that it is obvious to designate plural interconnected buses for the transport of data. Whether the buses in question are physically distinct and indirectly coupled or only separate in the abstract sense cannot be determined, as the claimed media bus, system data bus, and network bus are disclosed in a sufficiently vague manner to include both possibilities (see fig. 6 of the originally filed disclosure). Either case is obvious and well known in view of the prior art, as the sole purpose of a bus is simply to transport data between circuits.

Humpleman and Eames fail to disclose a digital converter connected to the multiple pairs to receive analog information from the multiple pairs and to produce digital information, a video overlay processor having three video overlay processor inputs and a video overlay processor output, a first video overlay processor input connected to a second media bus output of the media bus, a second video overlay processor input connected to a third media bus output of the media bus, and a third video overlay processor input connected to the system data bus, the video overlay processor output connected to the system data bus, the video overlay processor superimposing a first audio-visual signal over a second audio-video signal to produce a superimposed signal and outputting the superimposed signal over the video overlay processor output to the system data bus, and a mass storage device connected to the system data bus.

In an analogous art, Russo discloses a system for providing digital entertainment data (fig. 2) including a mass storage device coupled to a system data bus and storing information signals (fig. 2, storage 110, col. 7, lines 36-50), providing the benefit of stored programming for later playback (col. 3, lines 9-21).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Humpleman and Eames to include a mass storage device coupled to the system data bus and storing the information signals, as taught by Russo, for the benefit of stored programming for later playback.

Humpleman, Eames, and Russo fail to disclose a digital converter connected to the multiple pairs to receive analog information from the multiple pairs and to produce digital information, a video overlay processor having a first input connected to the media bus, a second input connected the system data bus, and an output connected to the system data bus, the video overlay processor superimposing a first audio-visual signal over a second audio-video signal to produce a superimposed signal and sending the superimposed signal to the system data bus.

In an analogous art, Inoue discloses a system for providing digital entertainment data that includes disclose a digital converter receiving analog information and producing digital information (fig. 2, A/D 37), and an overlay processor having at least 3 inputs and one output superimposing multiple information signals onto a first information signal (fig. 2, PIP control 34), providing



Art Unit: 2421

the benefit of allowing a user to view several sources of video on a screen simultaneously (see figs. 5a and 5b).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Humpleman, Eames, and Russo to include a digital converter receiving analog information and producing digital information, and an overlay processor having at least 3 inputs and one output superimposing multiple information signals onto a first information signal, as taught by Inoue, providing the benefit of allowing a user to view several sources of video on a screen simultaneously.

Regarding claims 5, 6, 39-41, 43, and 46, Humpleman, Eames, Russo, and Inoue disclose the system of claims 1 and 36, wherein a mass storage device stores an item identifier corresponding to each stored content item, the item identifier having a value that indicates the content item has been played (for pay-per-play usage, Russo, col. 5, lines 12-21), another value indicated the content items has been purchased (for open ended usage, Russo, col. 5, lines 45-58), a third value indicating the content item has been licensed (available for viewing, Russo, col. 5 line 59 - col. 6 line 9), a cost of playback for each content item (to debit the account for pay-per-play usage, Russo, col. 10, lines 33-34) and a second cost of purchase for each content item (to debit the account for open ended usage, Russo, col. 10, lines 33-34), and further disclose storing in memory a browser based graphical user interface, which upon instruction from

Art Unit: 2421

the client device, a processor sends the graphical user interface to the client device with the graphical user interface describing the content items stored in the memory, the processor receiving a command from the client device issued by a remote control, and the processor retrieving another instruction from the memory that is associated with the command issued by the remote control (Russo discloses the system provides a browser based user interface which provides information regarding program usage indicators and other descriptive data, granting access to stored and otherwise available programming, col. 5 line 59 - col. 6 line 9 and col. 10 line 59 - col. 11 line 15). The examiner recognizes that the pay-per-play and open ended, or 'rental' paradigm, uses are disclosed as alternative embodiments in Russo, however, they are not mutually exclusive and therefore both included when Humpleman and Eames are modified in view of Russo's disclosure to include the mass storage device.

Regarding claims 7, 8, and 42, Humpleman, Eames, Russo, and Inoue disclose the system of claims 1 and 36, but fail to disclose a card reader having a card reader input and a card reader output, the card reader input connected to an output of the decryption logic, the card reader providing authorization for the decryption logic to decrypt the plurality of information signals to produce decrypted digital information.

Examiner takes official notice that the use of so called "smart cards" to authorized access to encrypted television programming is notoriously well known

Art Unit: 2421

in the art (such as found in U.S. Patent No. 5,635,989 to Rothmuller, col. 3, lines 41-46), said cards having preprogramming access control information (such as decryption keys) that are inserted into a set top device to enable said device to decrypt particular transmissions using the information on the card. Said cards are used to ensure that only the bearer of the card is able to access encrypted content, which is more secure than sending decryption information over the network where it could be intercepted by an unauthorized user.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system of Humpleman, Eames, Russo, and Inoue to include a card reader having a card reader input and a card reader output, the card reader input connected to an output of the decryption logic, the card reader providing authorization for the decryption logic to decrypt the plurality of information signals to produce decrypted digital information.

Regarding claim 9, Humpleman, Eames, Russo, and Inoue disclose the system of claim 8, further comprising decoder logic connected to the media bus (Humpleman teaches the network interface units that are located at the gateway device perform all necessary decoding functions [decryption, access control, demultiplexing, etc...] prior to transmission over the bus to the switch, col. 7, lines 55-65).

Regarding claims 10-14, Humpleman, Eames, Russo, and Inoue disclose the system of claim 9, wherein the plurality of transmission signals include a plurality of television program signals (digital or mixed analog/digital broadcast signals), an audio signal (compressed audio), a data signal (Internet data), are received from a cable headend or direct broadcast satellite (cable provider or digital satellite service), and are frequency divided multiplex transmission signals (as is conventional for cable and satellite television broadcast services, Humpleman, col. 3, lines 21-35).

Regarding claim 45, Humpleman, Eames, Russo, and Inoue disclose the method of claim 36, wherein the data switch is a router (Humpleman, col. 5, lines 50-59).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2421

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC D. SALTARELLI whose telephone number is (571)272-7302. The examiner can normally be reached on Monday - Friday 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dominic D Saltarelli/  
Primary Examiner, Art Unit 2421